

UNITED STATES DISTRICT COURT
for the
DISTRICT OF MASSACHUSETTS

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.
UNITED STATES OF AMERICA, .

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Plaintiff, .
. CIVIL ACTION
v. . No. 85-0489-ADM

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METROPOLITAN DISTRICT COMMISSION, .
et al., .

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Defendants. .
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CONSERVATION LAW FOUNDATION OF .
NEW ENGLAND, INC., .

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Plaintiff, .
. CIVIL ACTION
v. . No. 83-1614-ADM

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METROPOLITAN DISTRICT COMMISSION, .
et al., .

.
Defendants. .
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MWRA MONTHLY COMPLIANCE REPORT FOR
MARCH 1998 AND PROGRESS REPORT AS OF APRIL 15, 1998

The Massachusetts Water Resources Authority (the "Authority") submits the following monthly compliance report for the month of March 1998 and supplementary compliance information in accordance with the Court's order of December 23, 1985, subsequent orders of the Court and undertakings of the Authority.

I. Schedule Six.

A status report for the scheduled activities for the month of March 1998 on the Court's Schedule Six, certified by Douglas B. MacDonald, Executive Director of the Authority, is attached hereto as Exhibit "A."

A. Activities Completed.

1. Commence Construction of Cottage Farm Facility Upgrade.

As reported last month, the Authority's Board of Directors authorized the award of a contract for construction to upgrade the Cottage Farm combined sewer overflow ("CSO") treatment facility. On March 27, 1998, the Authority issued a Notice to Proceed to the contractor, in compliance with Schedule Six.

B. Progress Report.

1. Harbor Management.

(a) Preparation for Transfer of South System Flows.

The Authority's Transport Department has completed all pre-operational testing of the Nut Island Headworks, including the odor control system and the grit system. The facility is ready for start up, pending the completion of testing of the South System Pump Station. In preparation for final testing of the South System pumps, the Headworks contractor removed the steel plates in the effluent channel at the Nut Island Treatment Plant to open the connection from the plant to the Inter-Island Tunnel. The connection allows a portion of the treated flow from the plant to flow into the Inter-Island Tunnel rather than the Nut Island outfalls.

Seven of the eight South System pumps were turned over to Deer Island Treatment Plant staff during the last week of March. A replacement capacitor has arrived on-site for the eighth pump, which is expected to be ready for turnover shortly.¹ On April 2, plant staff began test operations of the pumps, drawing portions of the treated Nut Island flow through the Inter-Island Tunnel. Plant staff have tested the pumps individually and are now performing multiple pump tests. A number of problems have been identified, and work is underway to address them. It is not yet certain how much time will be required to resolve the problems and complete the testing. The Authority hopes to be in a position to shut down the Nut Island plant and to begin transferring untreated South System flows through the new headworks to Deer Island for treatment by the end of the month or soon thereafter.

During March, the Authority met with the representative for the Town of Winthrop and resolved successfully remaining issues regarding the implementation of mitigation measures of concern to the Town in association with the transfer of South System flows to Deer Island. The Authority appreciates the cooperation of the Town of Winthrop in reaching an agreement to facilitate the transfer of flows.

(b) Operation of Secondary Treatment and Related Facilities.

Secondary Battery B currently is processing up to 195 million gallons per day ("MGD") of wastewater flow. As anticipated, Secondary Battery A resumed operation during the past month and is processing up to 150 MGD of flow. Plant staff will increase flows in Battery A gradually as operating parameters show adequate microbial growth.

In the residuals facility, the last set of digesters are now filled, with eight digesters on-line overall. On April 1, the centrifuge vendor began optimization of the waste sludge centrifuges to prepare for performance testing. The first performance test of the centrifuges (without polymer) is scheduled to begin by the end of the month.

(c) Construction of Effluent Outfall Tunnel.

The contractor for the Effluent Outfall Tunnel continues to perform grouting, clean-up and repair activities in the tunnel. Contact grouting is taking place on two shifts, with less than one mile of work remaining. "First pass" clean-up and repair to the tunnel arch is proceeding toward the Deer Island shaft, also with less than one mile remaining. Final clean-up and repairs to the tunnel invert have been completed and inspected in more than two miles of the tunnel, with the contractor now at the seven-mile mark.

(d) Thermal Plant.

As noted in the most recent Annual Progress Report for the Boston Harbor Project,² the Authority has continued to experience problems with completing the testing of the Thermal Plant on Deer Island.³ Efforts are now focused on resolving problems related to operation of the digester gas compressors that arose during testing of the digester gas system. The problems included short pressure spikes that caused excess fuel to enter the boiler

burners and contamination of the digester gas with lubricating oil from the gas compressors, either of which could impair boiler operation and potentially cause serious damage to the system. A team of consultants has developed several measures to address the problems, and implementation is in progress. Modifications to the compressor control logic are expected to be complete later this month. However, installation of pressure control valves in the compressors and an oil filtration system to remove oil from the digester gas is not likely to be complete until September. Once these modifications are in place, further testing of the digester gas system must await the completion of other construction necessary to connect the Thermal/Power plant to the permanent cooling water system for the Deer Island Treatment Plant, which is scheduled to occur in the Fall.⁴

In the meantime, the Authority has proceeded with testing of the steam turbine generator in the Thermal Plant, using fuel oil. This testing effort is well underway and is scheduled to be complete this month. After final testing of the digester gas system, overall functional testing of all systems must take place. Currently, the earliest date the Authority can project for acceptance of the entire Thermal Plant from the contractor is December 1998. However, the Authority is evaluating the possibility of acceptance of the boilers in mid-Summer without the digester gas system, for operation with fuel oil only.

(e) Corrosion Control Program.

As previously reported, the Authority undertook a corrosion control program to protect the Deer Island and Nut Island facilities from the higher than expected levels of hydrogen sulfide which occurred following initial operation of the new primary treatment facilities on Deer Island in 1995. The first phase of activity to repair and protect concrete and equipment on Deer Island took place in 1997.⁵ Today, the Authority's Board of Directors awarded the contract for the second and final phase of the concrete coatings and upgrade project.⁶ The contract is primarily for the completion of the coating in areas of the primary clarifiers and the influent and effluent channels not completed under the first phase.

(f) Construction Support Services.

At recent meetings, the Board of Directors has taken several actions to continue certain services necessary to support ongoing construction on Deer Island. First, with regard to transportation, the Authority exercised its option to extend the existing contract for bus service to transport workers from the parking area at Suffolk Downs to Deer Island. The extension allows for continued bus service through December 1999. With regard to water transportation, the Authority awarded new contracts for services to ferry personnel from Quincy and Boston and to barge trucks and construction equipment from the Fore River Staging Area. These contracts are in effect through June 2000, with six-month options for extension. The extension options for the water transportation contracts coincide with the current estimated completion for Final Paving and Site Completion, the last construction contract scheduled to take place under Boston Harbor Project - Deer Island construction management.⁷

The Board of Directors also has authorized extensions to its agreement with the Town of Winthrop to provide first response fire protection for Deer Island through June 2000.⁸ In addition, in coordination with the Town of Winthrop, the Authority has extended its agreement for round-the-clock Advanced Life Support ambulance service to Deer Island through June 1999.

2. Residuals Program.

(a) Report on Backup Disposal Plan.

In accordance with Schedule Six, the Authority is attaching as Exhibit "B" its report on actions taken on the backup residuals plan during the past six months. The Authority is also filing jointly with the Commonwealth a progress report on the implementation of the Memorandum of Understanding regarding beneficial use of biosolids.

(b) Pelletizing Plant Expansion.

The contractor for the expansion of the pelletizing plant has completed check out of the four new storage silos and is ready to begin performance testing. Modifications to the third existing silo are now complete and successfully tested. Inside the plant, the contractor continues to work on the installation of stairs, hand rails and decking. All process equipment for the two new dryer trains and associated control panels are in place. Installation of electrical conduit, gas piping, stainless steel piping between heat exchangers and power and control wiring for this equipment is ongoing. Functional testing of two of the first four centrifuges has been completed successfully.

3. CSO Control.

(a) Revisions to Schedule for CSO Projects.

During the past month, the Authority made considerable progress toward reaching agreement with the Environmental Protection Agency ("EPA") on proposed changes to Schedule Six necessary to conform certain CSO milestones to the Final CSO Facilities Plan and to address delays in completing floatables control projects and upgrades to several CSO treatment facilities, as explained in prior reports to the Court. Following a review of the proposed changes by its Board of Directors today, the Authority expects to circulate them to all of the parties to this action for their review. In the meantime, Authority staff will address remaining issues with EPA.

By its attorneys,

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CERTIFICATE OF SERVICE

I, John M. Stevens, attorney for the Massachusetts Water Resources Authority, do hereby certify that I have caused this document to be served by hand or mail to all counsel of record.

John M. Stevens (BBO No. 480140)

Dated: April 15, 1998

Notes:

1. As the Authority reported last month, the capacitor in the harmonic filter in the motor of one pump burned out during the contractor's testing period. See March 16, 1998 Compliance and Progress Report, p. 4.
2. See 1997 Annual Progress Report for the Boston Harbor Project (submitted January 30, 1998), p. 7.
3. In the meantime, the new boilers are available for use with fuel oil to meet the Deer Island Treatment Plant's heating requirements.
4. A temporary heat sink installed to dissipate excess heat generated during testing of the thermal plant must be dismantled during the Summer to allow construction of surge containment structures associated with the shafts adjacent to the North Main Pump Station. The Authority expects that it will be necessary to remove the heat sink before modifications to the digester gas system are complete and testing of the digester gas system can resume.
5. Among other reports, see Compliance and Progress Report dated June 16, 1997, p. 7 and 1997 Annual Progress Report for the Boston Harbor Project (submitted January 30, 1998), p. 7.
6. The Authority originally planned to do the project in three separate contracts, but has now consolidated all of the remaining work into the second phase, to be completed over two construction seasons.
7. Because the bus transportation contract could not be extended beyond December 1999, it will be necessary to plan for alternative means to continue bus service for the duration of construction.
8. Although Deer Island is part of the City of Boston, Winthrop has provided initial fire protection services until the arrival of the Boston Fire Department.